

I claim:

5        Claim 1.     A flow-through oxygenator comprising an emitter for electrolytic generation of microbubbles of oxygen comprising an anode separated at a critical distance from a cathode and a power source all in electrical communication with each other, wherein the emitter is placed within or adjacent to a conduit for flowing water.

10       Claim 2.     The emitter of claim 1 wherein the anode is a metal or a metallic oxide or a combination of a metal and a metallic oxide and the anode is platinum and iridium oxide on a support and the cathode is a metal or metallic oxide or a combination of a metal and a metallic oxide.

15       Claim 3.     The critical distance of claim 1 which is 0.005 to 0.140 inches.

      Claim 4.     The critical distance of claim 1 which is 0.045 to 0.060 inches.

20       Claim 5.     The product of claim 1 wherein the water is supersaturated with oxygen and of an approximately neutral pH.

      Claim 6.     A method for enhancing growth and yield of plants comprising the administration of supersaturated water on said plants.

25       Claim 7.     The method of claim 6 wherein the supersaturated water is delivered to the plants in hydroponic culture or through drip irrigation.

30       Claim 8.     A method for treating waste water comprising passing the waste water through a conduit comprising the emitter of claim 1.